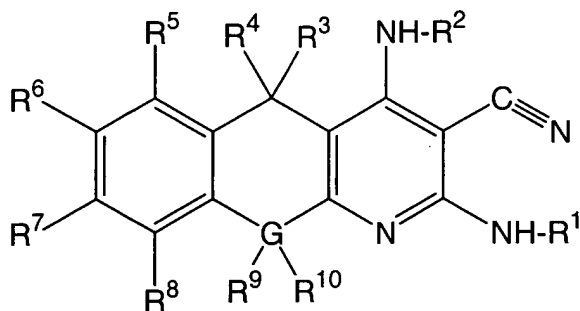


### CLAIM AMENDMENTS

The following listing of claims will replace all prior versions and listing of claims in the application.

1. **(currently amended)** An aminocyanopyridine compound having the structure:

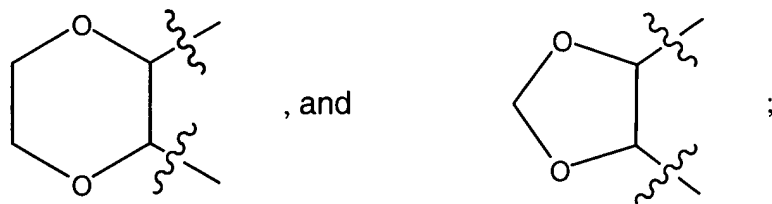


wherein:

each of R<sup>1</sup>, R<sup>2</sup>, [[R<sup>3</sup>, R<sup>4</sup>,]] R<sup>5</sup>, R<sup>6</sup>, R<sup>7</sup>, and R<sup>8</sup> is independently selected from the group consisting of hydrogen, hydroxy, amino, halo, nitro, branched or unbranched C<sub>1</sub>-C<sub>6</sub> alkyl, C<sub>2</sub>-C<sub>6</sub> alkenyl, C<sub>2</sub>-C<sub>6</sub> alkynyl, C<sub>1</sub>-C<sub>6</sub> alkoxy, hydroxy C<sub>1</sub>-C<sub>6</sub> alkyl, hydroxy C<sub>1</sub>-C<sub>6</sub> alkoxy, C<sub>1</sub>-C<sub>6</sub> alkoxy C<sub>1</sub>-C<sub>6</sub> alkoxy, C<sub>1</sub>-C<sub>6</sub> alkoxy C<sub>1</sub>-C<sub>6</sub> alkyl, C<sub>1</sub>-C<sub>6</sub> alkenoxy, branched or unbranched amino C<sub>1</sub>-C<sub>6</sub> alkyl, diamino C<sub>2</sub>-C<sub>6</sub> alkyl, C<sub>1</sub>-C<sub>6</sub> alkylamino C<sub>1</sub>-C<sub>6</sub> alkyl, C<sub>1</sub>-C<sub>6</sub> alkylamino, di-(C<sub>1</sub>-C<sub>6</sub> alkyl)amino, C<sub>1</sub>-C<sub>4</sub> alkoxyarylamino, C<sub>1</sub>-C<sub>4</sub> alkoxyalkylamino, amino C<sub>1</sub>-C<sub>6</sub> alkoxy, di-(C<sub>1</sub>-C<sub>4</sub> alkylamino, C<sub>2</sub>-C<sub>6</sub> alkoxy, di-(C<sub>1</sub>-C<sub>6</sub> alkyl)amino C<sub>1</sub>-C<sub>6</sub> alkyl, C<sub>1</sub>-C<sub>6</sub> alkylamino C<sub>1</sub>-C<sub>6</sub> alkoxy, halo C<sub>1</sub>-C<sub>6</sub> alkoxy, dihalo C<sub>1</sub>-C<sub>6</sub> alkoxy, trihalo C<sub>1</sub>-C<sub>6</sub> alkoxy, cyano C<sub>1</sub>-C<sub>6</sub> alkyl, dicyano C<sub>1</sub>-C<sub>6</sub> alkyl, cyano C<sub>1</sub>-C<sub>6</sub> alkoxy, dicyano C<sub>1</sub>-C<sub>6</sub> alkoxy, carbamyl C<sub>1</sub>-C<sub>4</sub> alkoxy, heterocyclyl C<sub>1</sub>-C<sub>4</sub> alkoxy, heteroaryl C<sub>1</sub>-C<sub>4</sub> alkoxy, sulfo, sulfamyl, C<sub>1</sub>-C<sub>4</sub> alkylaminosulfonyl, hydroxy C<sub>1</sub>-C<sub>4</sub> alkylaminosulfonyl, di-(C<sub>1</sub>-C<sub>4</sub> alkyl)aminosulfonyl, C<sub>1</sub>-C<sub>4</sub> alkylthio, C<sub>1</sub>-C<sub>4</sub> alkylsulfonyl, C<sub>1</sub>-C<sub>4</sub> alkylsulfinyl, aryl, aryl C<sub>1</sub>-C<sub>6</sub> alkyl, heterocyclyl C<sub>1</sub>-C<sub>6</sub> alkyl, heteroaryl C<sub>1</sub>-C<sub>6</sub> alkyl, heterocyclyl C<sub>1</sub>-C<sub>6</sub> alkoxy, heteroaryl C<sub>1</sub>-C<sub>6</sub> alkoxy, aryl C<sub>1</sub>-C<sub>6</sub> alkoxy, where the aryl ring can be substituted or unsubstituted, and, if substituted, the substituent group is selected from one or more of the group consisting of C<sub>1</sub>-C<sub>6</sub> alkyl, halo, amino, and C<sub>1</sub>-C<sub>6</sub> alkoxy, substituted or unsubstituted C<sub>3</sub>-C<sub>6</sub> cyclyl, C<sub>3</sub>-C<sub>6</sub> heterocyclyl, and, if substituted, the substituent group is

selected from one or more of the group consisting of C<sub>1</sub>-C<sub>6</sub> alkyl, C<sub>1</sub>-C<sub>6</sub> alkoxy, halo, amino, and where the C<sub>3</sub>-C<sub>6</sub> heterocyclyl ring contains O, S, or N, branched or unbranched C<sub>1</sub>-C<sub>6</sub> alkoxycarbonyl C<sub>1</sub>-C<sub>6</sub> alkoxy, and carboxy, carboxy C<sub>1</sub>-C<sub>6</sub> alkoxy, carboxy C<sub>1</sub>-C<sub>6</sub> alkyl, hydroxy C<sub>1</sub>-C<sub>4</sub> alkoxycarbonyl, C<sub>1</sub>-C<sub>4</sub> alkoxycarbonyl,

where R<sup>6</sup> and R<sup>7</sup> are such that they optionally join to form a ring system of the type selected from



**R<sup>3</sup> and R<sup>4</sup> are independently selected from the group consisting of hydrogen, hydroxy, amino, halo, nitro, branched or unbranched C<sub>1</sub>-C<sub>6</sub> alkyl, C<sub>2</sub>-C<sub>6</sub> alkenyl, C<sub>2</sub>-C<sub>6</sub> alkynyl, C<sub>1</sub>-C<sub>6</sub> alkoxy, hydroxy C<sub>1</sub>-C<sub>6</sub> alkyl, hydroxy C<sub>1</sub>-C<sub>6</sub> alkoxy, C<sub>1</sub>-C<sub>6</sub> alkoxy C<sub>1</sub>-C<sub>6</sub> alkoxy, C<sub>1</sub>-C<sub>6</sub> alkoxy C<sub>1</sub>-C<sub>6</sub> alkyl, C<sub>1</sub>-C<sub>6</sub> alkenoxy, branched or unbranched amino C<sub>1</sub>-C<sub>6</sub> alkyl, diamino C<sub>2</sub>-C<sub>6</sub> alkyl, C<sub>1</sub>-C<sub>6</sub> alkylamino C<sub>1</sub>-C<sub>6</sub> alkyl, C<sub>1</sub>-C<sub>6</sub> alkylamino, di-(C<sub>1</sub>-C<sub>6</sub> alkyl)amino, C<sub>1</sub>-C<sub>4</sub> alkoxyarylamino, C<sub>1</sub>-C<sub>4</sub> alkoxyalkylamino, amino C<sub>1</sub>-C<sub>6</sub> alkoxy, di-(C<sub>1</sub>-C<sub>4</sub> alkylamino, C<sub>2</sub>-C<sub>6</sub> alkoxy, di-(C<sub>1</sub>-C<sub>6</sub> alkyl)amino C<sub>1</sub>-C<sub>6</sub> alkyl, C<sub>1</sub>-C<sub>6</sub> alkylamino C<sub>1</sub>-C<sub>6</sub> alkoxy, halo C<sub>1</sub>-C<sub>6</sub> alkoxy, dihalo C<sub>1</sub>-C<sub>6</sub> alkoxy, trihalo C<sub>1</sub>-C<sub>6</sub> alkoxy, cyano C<sub>1</sub>-C<sub>6</sub> alkyl, cyano C<sub>1</sub>-C<sub>6</sub> alkoxy, dicyano C<sub>1</sub>-C<sub>6</sub> alkoxy, carbamyl C<sub>1</sub>-C<sub>4</sub> alkoxy, heterocyclyl C<sub>1</sub>-C<sub>4</sub> alkoxy, heteroaryl C<sub>1</sub>-C<sub>4</sub> alkoxy, sulfo, sulfamyl, C<sub>1</sub>-C<sub>4</sub> alkylaminosulfonyl, hydroxy C<sub>1</sub>-C<sub>4</sub> alkylaminosulfonyl, di-(C<sub>1</sub>-C<sub>4</sub> alkyl)aminosulfonyl, C<sub>1</sub>-C<sub>4</sub> alkylthio, C<sub>1</sub>-C<sub>4</sub> alkylsulfonyl, C<sub>1</sub>-C<sub>4</sub> alkylsulfinyl, aryl, aryl C<sub>1</sub>-C<sub>6</sub> alkyl, heterocyclyl C<sub>1</sub>-C<sub>6</sub> alkyl, heteroaryl C<sub>1</sub>-C<sub>6</sub> alkyl, heterocyclyl C<sub>1</sub>-C<sub>6</sub> alkoxy, heteroaryl C<sub>1</sub>-C<sub>6</sub> alkoxy, aryl C<sub>1</sub>-C<sub>6</sub> alkoxy, where the aryl ring can be substituted or unsubstituted, and, if substituted, the substituent group is selected from one or more of the group consisting of C<sub>1</sub>-C<sub>6</sub> alkyl, halo, amino, and C<sub>1</sub>-C<sub>6</sub> alkoxy, substituted or unsubstituted C<sub>3</sub>-C<sub>6</sub> cyclyl, C<sub>3</sub>-C<sub>6</sub> heterocyclyl, and, if substituted, the substituent group is selected from one or more of the group consisting of C<sub>1</sub>-C<sub>6</sub> alkyl, C<sub>1</sub>-C<sub>6</sub> alkoxy, halo, amino, and where the C<sub>3</sub>-C<sub>6</sub> heterocyclyl ring contains O, S, or N, branched**

**or unbranched C<sub>1</sub>-C<sub>6</sub> alkoxy carbonyl C<sub>1</sub>-C<sub>6</sub> alkoxy, and carboxy, carboxy C<sub>1</sub>-C<sub>6</sub> alkoxy, carboxy C<sub>1</sub>-C<sub>6</sub> alkyl, hydroxy C<sub>1</sub>-C<sub>4</sub> alkoxy carbonyl, C<sub>1</sub>-C<sub>4</sub> alkoxy carbonyl;**

G is selected from the group consisting of oxygen, sulfur, and nitrogen;  
when G is oxygen, R<sup>9</sup> and R<sup>10</sup> are absent;  
when G is sulfur, each of R<sup>9</sup> and R<sup>10</sup> is optionally absent, or is oxo;  
when G is nitrogen, R<sup>4</sup> is hydrogen, R<sup>9</sup> is absent, and R<sup>10</sup> is C<sub>1</sub>-C<sub>4</sub>-alkyl.

2. **(currently amended)** The aminocyanopyridine having the structure shown in claim 1, where:

R<sup>1</sup> is selected from the group consisting of hydrogen, branched or unbranched alkyl, alkenyl, alkynyl, alkoxy, alkylaryl, arylalkyl, carboxy, carboxyalkyl, hydroxyalkyl, ~~alkyl carboxy~~ **alkoxy carbonyl**, aryl, amino, aminoalkyl, alkylamino, halo, alkylaminoalkyl, alkoxy, alkoxyalkyl, monocyclyl, bicyclyl, polycyclyl, and heterocyclyl;

R<sup>2</sup> is selected from the group consisting of hydrogen, alkyl, alkenyl, alkynyl, alkoxy, hydroxyalkyl, alkylaryl, arylalkyl, alkoxyaryl, aminoalkyl, alkylaminoalkyl, arylaminoalkyl, alkoxyalkyl, ~~alkyl carboxy~~ **alkoxy carbonyl**, and carboxyalkyl;

R<sup>3</sup> is selected from the group consisting of hydrogen, ~~diacyanoalkyl~~, and substituted or unsubstituted heterocyclyl and cyclyl, where substituents, if any, comprise halo moieties;

R<sup>4</sup> is selected from the group consisting of hydrogen, ~~diacyanoalkyl~~, and substituted or unsubstituted heterocyclyl and cyclyl, where substituents, if any, comprise halo moieties;

R<sup>5</sup> is selected from the group consisting of hydrogen, alkoxy, halo, alkyl, alkenyl, ~~alkyl~~ **alkynyl**, arylalkyl, and alkylaryl;

R<sup>6</sup> is selected from the group consisting of hydrogen, hydroxy, alkoxy, alkyl, alkenyl, alkynyl, amino, alkylamino, arylamino, alkylaminoalkyl, carboxy, aminoalkoxy, halo, ~~alkyl carboxyalkyl~~ **alkoxy carbonyl alkyl**, alkylamino, aminoalkyl, nitro, aryl, arylalkyl, alkylaryl, and arylamino;

R<sup>7</sup> is selected from the group consisting of hydrogen, hydroxy, alkoxy, alkenoxy, hydroxyalkoxy, alkoxyalkoxy, aminoalkoxy, heterocyclylalkyl, heterocyclylalkoxy, carboxyalkoxy, alkylaminoalkoxy, and ~~alkyl carboxyalkoxy~~ **alkoxy carbonyl alkoxy**;

where the R<sup>6</sup> and R<sup>7</sup> groups optionally join to form a six membered heterocyclic ring;

R<sup>8</sup> is selected from the group consisting of hydrogen, hydroxy, halo, nitro, amino, alkyl, alkoxy, heterocyclalkoxy, carboxyalkoxy, pyrrolidylethoxy, carboxymethoxy, hydroxyalkoxy, aminoalkoxy, ~~alkylcarboxy~~ alkoxycarbonyl, alkylaminoalkyl, carboxy, and heterocyclalkyl; and

G is selected from the group consisting of oxygen, sulfur, and nitrogen;

when G is oxygen, R<sup>9</sup> and R<sup>10</sup> are absent;

when G is sulfur, each of R<sup>9</sup> and R<sup>10</sup> is optionally absent, or is oxo;

when G is nitrogen, R<sup>9</sup> is absent, and R<sup>10</sup> is C<sub>1</sub>-C<sub>4</sub>-alkyl.

3. **(currently amended)** The aminocyanopyridine having the structure shown in claim 1, where:

R<sup>1</sup> is selected from the group consisting of hydrogen, ethyl, dimethylaminoethyl, butyl, propyl, methoxyethyl, tetramethylaminoethyl, and carboxymethyl;

R<sup>2</sup> is selected from the group consisting of hydrogen, hydroxyethyl, propyl, ethyl, methyl, 4-methoxyphenyl, ethoxyethyl, aminoethyl, phenylmethyl, dimethylaminoethyl, phthalaminoethyl, butyl, methoxyethyl, tetramethylaminoethyl, and carboxymethyl;

R<sup>3</sup> is selected from the group consisting of hydrogen, ~~dicyanomethyl~~, 2-fluorophenyl, phenyl, and 3-fluorophenyl.

R<sup>4</sup> is selected from the group consisting of hydrogen, ~~dicyanomethyl~~, 2-fluorophenyl, phenyl, and 3-fluorophenyl;

R<sup>5</sup> is selected from the group consisting of hydrogen, hydroxy, methoxy, bromo, and 2-pyridomethyl;

R<sup>6</sup> is selected from the group consisting of hydrogen, hydroxy, methoxy, amino, carboxy, diaminoethoxy, bromo, propoxy, isobutylcarboxymethoxy, dimethylamino, nitro, phenyl, chloro, pyridylmethyl, and fluoro;

R<sup>7</sup> is selected from the group consisting of hydrogen, hydroxy, methoxy, hydroxyethoxy, ethoxyethoxy, ethoxy, aminoethoxy, morpholinoethoxy, carboxymethoxy, N-pyrrolidylethoxy, dimethylaminoethoxy, pyridylmethyl, 2-propenoxy, and isobutylcarboxymethoxy,

where the R<sup>6</sup> and R<sup>7</sup> groups optionally join to form a six membered heterocyclic ring;

R<sup>8</sup> is selected from the group consisting of hydrogen, hydroxy, fluoro, methoxy, nitro, amino, pyrrolidylethoxy, carboxymethoxy, methyl, hydroxyethoxy, aminoethoxy, 4-pyridylmethoxy, isobutyl, ~~ethylcarboxy~~ ethoxycarbonyl, dimethylaminoethoxy, carboxy, bromo, and pyrridylmethyl; and

G is selected from the group consisting of oxygen, sulfur, and nitrogen;

when G is oxygen, R<sup>9</sup> and R<sup>10</sup> are absent;

when G is sulfur, each of R<sup>9</sup> and R<sup>10</sup> is optionally absent, or is oxo;

when G is nitrogen, R<sup>9</sup> is absent, and R<sup>10</sup> is -CH<sub>3</sub>.

4. **(currently amended)** The aminocyanopyridine having the structure shown in claim 1, where:

R<sup>1</sup> is selected from the group consisting of hydrogen, and C<sub>1</sub>-C<sub>2</sub> ~~alky~~ alkyl;

R<sup>2</sup> is selected from the group consisting of hydrogen, C<sub>1</sub>-C<sub>3</sub> alkyl, hydroxy C<sub>1</sub>-C<sub>2</sub> alkyl, C<sub>1</sub>-C<sub>2</sub> alkoxyphenyl, C<sub>1</sub>-C<sub>2</sub> alkoxy C<sub>1</sub>-C<sub>2</sub> alkyl, amino C<sub>1</sub>-C<sub>2</sub> alkyl, phenyl C<sub>1</sub>-C<sub>2</sub> alkyl, and di C<sub>1</sub>-C<sub>2</sub> alkylamino C<sub>1</sub>-C<sub>2</sub> alkyl;

R<sup>3</sup> and R<sup>4</sup> are each independently selected from the group consisting of hydrogen, ~~diacyano C<sub>1</sub>-C<sub>2</sub> alkyl~~, and halophenyl;

R<sup>5</sup> is selected from the group consisting of hydrogen, and hydroxy;

R<sup>6</sup> is selected from the group consisting of hydrogen, hydroxy, C<sub>1</sub> - C<sub>3</sub> alkoxy, amino, nitro, carboxy, diamino C<sub>1</sub> - C<sub>2</sub> alkoxy, halo, propenoxy, iso C<sub>3</sub> - C<sub>4</sub> ~~alkylearboxy~~ alkoxycarbonyl C<sub>1</sub> - C<sub>2</sub> alkoxy, di C<sub>1</sub> - C<sub>2</sub> alkylamino, and phenyl;

R<sup>7</sup> is selected from the group consisting of hydrogen, hydroxy, C<sub>1</sub> - C<sub>3</sub> alkoxy, hydroxy C<sub>1</sub> - C<sub>2</sub> alkoxy, C<sub>1</sub> - C<sub>2</sub> alkoxy C<sub>1</sub> - C<sub>2</sub> alkoxy, amino C<sub>1</sub> - C<sub>2</sub> alkoxy, morpholino C<sub>1</sub> - C<sub>2</sub> alkoxy, carboxyl C<sub>1</sub> - C<sub>2</sub> alkoxy, pyrrolidyl C<sub>1</sub> - C<sub>2</sub> alkoxy, di C<sub>1</sub> - C<sub>2</sub> alkylamino C<sub>1</sub> - C<sub>2</sub> alkoxy, pyrrolidyl C<sub>1</sub> - C<sub>2</sub> alkyl, iso C<sub>3</sub> - C<sub>4</sub> ~~alkylearboxy~~ alkoxycarbonyl C<sub>1</sub> - C<sub>2</sub> alkoxy, and ~~2-propenoxy~~ 2-propenoxy,

where the R<sup>6</sup> and R<sup>7</sup> groups optionally join to form a six membered heterocyclic ring;

R<sup>8</sup> is selected from the group consisting of hydrogen, hydroxy, halo, C<sub>1</sub>-C<sub>2</sub> alkyl, C<sub>1</sub>-C<sub>2</sub> alkoxy, nitro, amino, pyrrolidyl C<sub>1</sub>-C<sub>2</sub> alkoxy, carboxy C<sub>1</sub>-C<sub>2</sub> alkoxy, hydroxy C<sub>1</sub>-C<sub>2</sub> alkoxy, and amino C<sub>1</sub>-C<sub>2</sub> alkoxy; and

G is selected from the group consisting of oxygen and sulfur;  
when G is sulfur, each of R<sup>9</sup> and R<sup>10</sup> is optionally absent, or is oxo;  
when G is oxygen, R<sup>9</sup> and R<sup>10</sup> are absent.

5. **(currently amended)** The aminocyanopyridine having the structure shown in claim 1, where:

R<sup>1</sup> is hydrogen;

R<sup>2</sup> is selected from the group consisting of hydrogen, C<sub>1</sub> - C<sub>3</sub> alkyl, hydroxy C<sub>1</sub> - C<sub>2</sub> alkyl, C<sub>1</sub> - C<sub>2</sub> alkoxyphenyl, C<sub>1</sub> - C<sub>2</sub> alkoxy C<sub>1</sub> - C<sub>2</sub> alkyl, amino C<sub>1</sub> - C<sub>2</sub> alkyl, phenyl C<sub>1</sub> - C<sub>2</sub> alkyl, and di C<sub>1</sub> - C<sub>2</sub> alkylamino C<sub>1</sub> - C<sub>2</sub> alkyl;

R<sup>3</sup> and R<sup>4</sup> are each ~~independently selected from the group consisting of hydrogen, and~~  
~~dievano C<sub>1</sub>-C<sub>2</sub> alkyl.~~

R<sup>5</sup> is selected from the group consisting of hydrogen, and hydroxy;

R<sup>6</sup> is selected from the group consisting of hydrogen, hydroxy, C<sub>1</sub>-C<sub>2</sub> alkoxy, amino, carboxy, nitro, diamino C<sub>1</sub>-C<sub>2</sub> alkoxy, halo, 2-propenoxy, iso C<sub>3</sub>-C<sub>4</sub> ~~alkylcarboxy~~  
alkoxycarbonyl C<sub>1</sub>-C<sub>2</sub> alkoxy, di C<sub>1</sub>-C<sub>2</sub> alkylamino, and phenyl;

R<sup>7</sup> is selected from the group consisting of hydrogen, hydroxy, C<sub>1</sub> - C<sub>2</sub> alkoxy, hydroxy C<sub>1</sub>-C<sub>2</sub> alkoxy, C<sub>1</sub>-C<sub>2</sub> alkoxy C<sub>1</sub>-C<sub>2</sub> alkoxy, amino C<sub>1</sub>-C<sub>2</sub> alkoxy, morpholino C<sub>1</sub>-C<sub>2</sub> alkoxy, carboxyl C<sub>1</sub>-C<sub>2</sub> alkoxy, pyrrolidyl C<sub>1</sub>-C<sub>2</sub> alkoxy, di C<sub>1</sub>-C<sub>2</sub> alkylamino C<sub>1</sub>-C<sub>2</sub> alkoxy, pyrrolidyl C<sub>1</sub>-C<sub>2</sub> alkyl, iso C<sub>3</sub>-C<sub>4</sub> ~~alkylcarboxy~~ alkoxycarbonyl C<sub>1</sub>-C<sub>2</sub> alkoxy, and 2-propenoxy;

wherein the R<sup>6</sup> and R<sup>7</sup> groups optionally join to form a six membered heterocyclic ring;

R<sup>8</sup> is selected from the group consisting of hydrogen, hydroxy, halo, C<sub>1</sub>-C<sub>2</sub> alkoxy, nitro, amino, pyrrolidyl C<sub>1</sub>-C<sub>2</sub> alkoxy, and carboxy C<sub>1</sub>-C<sub>2</sub> alkoxy; and

G is selected from the group consisting of oxygen and sulfur;

when G is sulfur, each of R<sup>9</sup> and R<sup>10</sup> is optionally absent, or is oxo;

when G is oxygen, R<sup>9</sup> and R<sup>10</sup> are absent.

6. **(currently amended)** The aminocyanopyridine having the structure shown in claim 1, where:

R<sup>1</sup> is hydrogen;

R<sup>2</sup> is selected from the group consisting of hydrogen, C<sub>1</sub>-C<sub>3</sub> alkyl, hydroxy C<sub>1</sub>-C<sub>2</sub> alkyl, C<sub>1</sub>-C<sub>2</sub> alkoxyphenyl, C<sub>1</sub>-C<sub>2</sub> alkoxy C<sub>1</sub>-C<sub>2</sub> alkyl, amino C<sub>1</sub>-C<sub>2</sub> alkyl, and phenyl C<sub>1</sub>-C<sub>2</sub> alkyl;

R<sup>3</sup> and R<sup>4</sup> are each ~~independently selected from the group consisting of~~ hydrogen, ~~and~~ ~~di~~cyano C<sub>1</sub>-C<sub>2</sub> alkyl.

R<sup>5</sup> is selected from the group consisting of hydrogen, and hydroxy;

R<sup>6</sup> is selected from the group consisting of hydrogen, hydroxy, C<sub>1</sub>-C<sub>2</sub> alkoxy, amino, carboxy, diamino C<sub>1</sub>-C<sub>2</sub> alkoxy, halo, 2-propenoxy, iso C<sub>3</sub>-C<sub>4</sub> ~~alkyl~~carboxy alkoxycarbonyl C<sub>1</sub>-C<sub>2</sub> alkoxy, and di C<sub>1</sub>-C<sub>2</sub> alkylamino;

R<sup>7</sup> is selected from the group consisting of hydrogen, hydroxy, C<sub>1</sub>-C<sub>2</sub> alkoxy, hydroxy C<sub>1</sub>-C<sub>2</sub> alkoxy, C<sub>1</sub>-C<sub>2</sub> alkoxy C<sub>1</sub>-C<sub>2</sub> alkoxy, amino C<sub>1</sub>-C<sub>2</sub> alkoxy, morpholino C<sub>1</sub>-C<sub>2</sub> alkoxy, carboxyl C<sub>1</sub>-C<sub>2</sub> alkoxy, pyrrolidyl C<sub>1</sub>-C<sub>2</sub> alkoxy, di C<sub>1</sub>-C<sub>2</sub> alkylamino C<sub>1</sub>-C<sub>2</sub> alkoxy, pyrrolidyl C<sub>1</sub>-C<sub>2</sub> alkyl, iso C<sub>3</sub>-C<sub>4</sub> ~~alkyl~~carboxy alkoxycarbonyl C<sub>1</sub>-C<sub>2</sub> alkoxy, and 2-propenoxy,

where the R<sup>6</sup> and R<sup>7</sup> groups optionally join to form a six membered heterocyclic ring;

R<sup>8</sup> is selected from the group consisting of hydrogen, hydroxy, halo, C<sub>1</sub>-C<sub>2</sub> alkoxy, nitro, amino, and pyrrolidyl C<sub>1</sub>-C<sub>2</sub> alkoxy; and

G is selected from the group consisting of oxygen and sulfur;

when G is sulfur, each of R<sup>9</sup> and R<sup>10</sup> is optionally absent, or is oxo;

when G is oxygen, R<sup>9</sup> and R<sup>10</sup> are absent.

7. **(currently amended)** The aminocyanopyridine having the structure shown in claim 1, where:

R<sup>1</sup> is hydrogen;

R<sup>2</sup> is selected from the group consisting of hydrogen, C<sub>1</sub>-C<sub>3</sub> alkyl, hydroxy C<sub>1</sub>-C<sub>2</sub> alkyl, C<sub>1</sub>-C<sub>2</sub> alkoxyphenyl, C<sub>1</sub>-C<sub>2</sub> alkoxy C<sub>1</sub>-C<sub>2</sub> alkyl, and amino C<sub>1</sub>-C<sub>2</sub> alkyl;

R<sup>3</sup> and R<sup>4</sup> are each ~~independently selected from the group consisting of~~ hydrogen, ~~and~~ ~~di~~cyanoethyl;

R<sup>5</sup> is selected from the group consisting of hydrogen, and hydroxy;

R<sup>6</sup> is selected from the group consisting of hydrogen, hydroxy, C<sub>1</sub>-C<sub>2</sub> alkoxy, amino, carboxy, diamino C<sub>1</sub>-C<sub>2</sub> alkoxy, halo, 2-propenoxy, iso C<sub>3</sub>-C<sub>4</sub> ~~alkyl~~carboxy alkoxycarbonyl C<sub>1</sub>-C<sub>2</sub> alkoxy, and di C<sub>1</sub>-C<sub>2</sub> alkylamino;

R<sup>7</sup> is selected from the group consisting of hydrogen, hydroxy, C<sub>1</sub>-C<sub>2</sub> alkoxy, hydroxy C<sub>1</sub>-C<sub>2</sub> alkoxy, C<sub>1</sub>-C<sub>2</sub> alkoxy C<sub>1</sub>-C<sub>2</sub> alkoxy, amino C<sub>1</sub>-C<sub>2</sub> alkoxy, morpholino C<sub>1</sub>-C<sub>2</sub> alkoxy, carboxyl C<sub>1</sub>-C<sub>2</sub> alkoxy, pyrrolidyl C<sub>1</sub>-C<sub>2</sub> alkoxy, di C<sub>1</sub>-C<sub>2</sub> alkylamino C<sub>1</sub>-C<sub>2</sub> alkoxy, pyrrolidyl C<sub>1</sub>-C<sub>2</sub> alkyl, iso C<sub>3</sub>-C<sub>4</sub> ~~alkyl~~carboxy alkoxycarbonyl C<sub>1</sub>-C<sub>2</sub> alkoxy, and 2-propenoxy,

where the R<sup>6</sup> and R<sup>7</sup> groups optionally join to form a six membered heterocyclic ring;

R<sup>8</sup> is selected from the group consisting of hydrogen, hydroxy, halo, methoxy, nitro, and amino; and

G is selected from the group consisting of oxygen and sulfur;

when G is sulfur, each of R<sup>9</sup> and R<sup>10</sup> is optionally absent, or is oxo;

when G is oxygen, R<sup>9</sup> and R<sup>10</sup> are absent.

8. **(currently amended)** An aminocyanopyridine compound that is selected from the group consisting of:

2,4-diamino-7,8-dihydroxy-5H-chromeno[2,3-b]pyridine-3-carbonitrile,

2,4-diamino-8-hydroxy-5H-chromeno[2,3-b]pyridine-3-carbonitrile,

2-amino-7,8-dihydroxy-4-[(2-hydroxyethyl)amino]-5H-chromeno[2,3-b]pyridine-3-carbonitrile,

2,4-diamino-7,8-dimethoxy-5H-chromeno[2,3-b]pyridine-3-carbonitrile,

2-amino-7,8-dihydroxy-4-(propylamino)-5H-chromeno[2,3-b]pyridine-3-carbonitrile,

2-amino-4-(ethylamino)-7,8-dihydroxy-5H-chromeno[2,3-b]pyridine-3-carbonitrile,

2,4-diamino-9-hydroxy-5H-chromeno[2,3-b]pyridine-3-carbonitrile,

2,4-diamino-9-fluoro-5H-chromeno[2,3-b]pyridine-3-carbonitrile,

2,4-diamino-7-hydroxy-5H-chromeno[2,3-b]pyridine-3-carbonitrile,

2,4-diamino-8-(2-hydroxyethoxy)-5H-chromeno[2,3-b]pyridine-3-carbonitrile,

8,10-diamino-2,3-dihydro-11H-[1,4]dioxino[2',3':6,7]chromeno[2,3-b]pyridine-9-carbonitrile,

2,4,7-triamino-5H-chromeno[2,3-b]pyridine-3-carbonitrile

2,4-diamino-5H-chromeno[2,3-b]pyridine-3-carbonitrile,

2,4-diamino-8-(2-ethoxyethoxy)-7-hydroxy-5H-chromeno[2,3-b]pyridine-3-carbonitrile,

2,4-diamino-9-hydroxy-8-methoxy-5H-chromeno[2,3-b]pyridine-3-carbonitrile,



2,4-diamino-6,8-dihydroxy-5H-chromeno[2,3-b]pyridine-3-carbonitrile,  
2,4-diamino-8-ethoxy-7-hydroxy-5H-chromeno[2,3-b]pyridine-3-carbonitrile,  
2,4-diamino-8-(2-ethoxyethoxy)-5H-chromeno[2,3-b]pyridine-3-carbonitrile,  
2,4-diamino-8-(2-aminoethoxy)-5H-chromeno[2,3-b]pyridine-3-carbonitrile,  
2,4-diamino-3-cyano-5H-chromeno[2,3-b]pyridine-7-carboxylic acid,  
2,4-diamino-8,9-dihydroxy-5H-chromeno[2,3-b]pyridine-3-carbonitrile,  
2,4-diamino-8-(2-morpholin-4-ylethoxy)-5H-chromeno[2,3-b]pyridine-3-carbonitrile,  
[(2,4-diamino-3-cyano-5H-chromeno[2,3-b]pyridin-8-yl)oxy]acetic acid,  
2,4-diamino-9-methoxy-5H-chromeno[2,3-b]pyridine-3-carbonitrile,  
2,4-diamino-8-(2-pyrrolidin-1-ylethoxy)-5H-chromeno[2,3-b]pyridine-3-carbonitrile,  
2-amino-7,8-dimethoxy-4-(methylamino)-5H-chromeno[2,3-b]pyridine-3-carbonitrile,  
2,4-diamino-8-methoxy-5H-chromeno[2,3-b]pyridine-3-carbonitrile,  
2,4-diamino-8-[2-(dimethylamino)ethoxy]-5H-chromeno[2,3-b]pyridine-3-carbonitrile,  
2,4,7-triamino-9-methoxy-5H-chromeno[2,3-b]pyridine-3-carbonitrile,  
2(2,4-diamino-3-cyano-8-methoxy-5H-chromeno[2,3-b]pyridin-5-yl)malononitrile,  
2,4-diamino-7,8-di[2-(amino)ethoxy]-5H-chromeno[2,3-b]pyridine-3-carbonitrile,  
2,4-diamino-9-nitro-5H-chromeno[2,3-b]pyridine-3-carbonitrile,  
2-amino-7,8-dimethoxy-4-[(4-methoxyphenyl)amino]-5H-chromeno[2,3-b]pyridine-3-  
carbonitrile,  
2,4-diamino-8-methoxy-5H-chromeno[2,3-b]pyridine-3-carbonitrile,  
2(2,4-diamino-3-cyano-7-hydroxy-5H-chromeno[2,3-b]pyridin-5-yl)malononitrile,  
2(2,4-diamino-3-cyano-7-bromo-5H-chromeno[2,3-b]pyridin-5-yl)malononitrile,  
2-amino-8-ethoxy-4-(ethylamino)-5H-chromeno[2,3-b]pyridine-3-carbonitrile,  
2,4,9-triamino-5H-chromeno[2,3-b]pyridine-3-carbonitrile,  
2,4,7-triamino-5H-thiochromeno[2,3-b]pyridine-3-carbonitrile,  
2-amino-7,8-dimethoxy-4-[(4-methoxyphenyl)amino]-5H-chromeno[2,3-b]pyridine-3-  
carbonitrile,  
2(2,4-diamino-3-cyano-7-methoxy-5H-chromeno[2,3-b]pyridin-5-yl)malononitrile,  
2,4-diamino-9-hydroxy-8-(piperidin-1-ylmethyl)-5H-chromeno[2,3-b]pyridine-3-  
carbonitrile,

7,8-bis(allyloxy)-2,4-diamino-5H-chromeno[2,3-b]pyridine-3-carbonitrile,  
2-amino-8-(2-ethoxyethoxy)-4-[(2-ethoxyethyl)amino]-5H-chromeno[2,3-b]pyridine-3-carbonitrile,  
tert-butyl {[2,4-diamino-7-(2-tert-butoxy-2-oxoethoxy)-3-cyano-5H-chromeno[2,3-b]pyridin-8-yl]oxy}acetate,  
2-amino-4-[(2-aminoethyl)amino]-7,8-dimethoxy-5H-chromeno[2,3-b]pyridine-3-carbonitrile,  
2(2,4-diamino-3-cyano-8-hydroxy-5H-chromeno[2,3-b]pyridin-5-yl)malononitrile,  
2,4,7-triamino-5H-thiochromeno[2,3-b]pyridine-3-carbonitrile 10,10-dioxide,  
2,4-diamino-7-bromo-5H-chromeno[2,3-b]pyridine-3-carbonitrile,  
2-amino-7,8-dimethoxy-4-(propylamino)-5H-chromeno[2,3-b]pyridine-3-carbonitrile,  
2,4-diamino-7-hydroxy-5H-thiochromeno[2,3-b]pyridine-3-carbonitrile,  
2,4-diamino-7-(dimethylamino)-5H-chromeno[2,3-b]pyridine-3-carbonitrile,  
2,4-diamino-7-methoxy-5H-chromeno[2,3-b]pyridine-3-carbonitrile,  
2(2,4-diamino-3-cyano-9-methoxy-5H-chromeno[2,3-b]pyridin-5-yl)malononitrile,  
2-amino-4-(benzylamino)-7,8-dimethoxy-5H-chromeno[2,3-b]pyridine-3-carbonitrile,  
8-(allyloxy)-2,4-diamino-5H-chromeno[2,3-b]pyridine-3-carbonitrile,  
2,4-diamino-9-fluoro-5H-thiochromeno[2,3-b]pyridine-3-carbonitrile,  
2,4-diamino-7-methoxy-5H-chromeno[2,3-b]pyridine-3-carbonitrile,  
2,4-diamino-9-(2-pyrrolidin-1-ylethoxy)-5H-chromeno[2,3-b]pyridine-3-carbonitrile,  
2,4-diamino-7-nitro-5H-chromeno[2,3-b]pyridine-3-carbonitrile,  
2,4-diamino-10-methyl-5,10-dihydrobenzo[b]-1,8-naphthyridine-3-carbonitrile,  
[(2,4-diamino-3-cyano-5H-chromeno[2,3-b]pyridin-9-yl)oxy]acetic acid,  
2-amino-4-{[2-(dimethylamino)ethyl]amino}-7,8-dimethoxy-5H-chromeno[2,3-b]pyridine-3-carbonitrile,  
2,4-diamino-7-nitro-5H-thiochromeno[2,3-b]pyridine-3-carbonitrile 10,10-dioxide,  
2,4-diamino-7-phenyl-5H-chromeno[2,3-b]pyridine-3-carbonitrile,  
2,4-diamino-7-chloro-9-methyl-5H-chromeno[2,3-b]pyridine-3-carbonitrile,  
2,4-diamino-7-fluoro-5H-thiochromeno[2,3-b]pyridine-3-carbonitrile 10,10-dioxide,  
8-ethoxy-2,4-bis(ethylamino)-5H-chromeno[2,3-b]pyridine-3-carbonitrile,

2,4-diamino-5-(2-fluoro-phenyl)-8-methoxy-5H-chromeno[2,3-b]pyridine-3-carbonitrile,  
2,4-diamino-9-(2-hydroxyethoxy)-5H-chromeno[2,3-b]pyridine-3-carbonitrile,  
2,4-diamino-9-(2-aminoethoxy)-5H-chromeno[2,3-b]pyridine-3-carbonitrile,  
2(2,4-diamino-3-cyano-7-chloro-5H-chromeno[2,3-b]pyridin-5-yl)malononitrile,  
2,4-bis{[2-(dimethylamino)ethyl]amino}-7,8-dimethoxy-5H-chromeno[2,3-b]pyridine-3-carbonitrile,  
2-amino-4-{[2-(1,3-dioxo-1,3-dihydro-2H-isoindol-2-yl)ethyl]amino}-7,8-dimethoxy-5H-chromeno[2,3-b]pyridine-3-carbonitrile,  
2,4-diamino-7-fluoro-5H-chromeno[2,3-b]pyridine-3-carbonitrile,  
2,4-diamino-7-bromo-5H-chromeno[2,3-b]pyridine-3-carbonitrile,  
2,4-diamino-9-(pyridin-4-ylmethoxy)-5H-chromeno[2,3-b]pyridine-3-carbonitrile,  
2,4-diamino-7-chloro-5H-chromeno[2,3-b]pyridine-3-carbonitrile,  
2,4-diamino-9-tert-butyl-5H-chromeno[2,3-b]pyridine-3-carbonitrile,  
ethyl 2,4-diamino-3-cyano-5H-chromeno[2,3-b]pyridine-9-carboxylate,  
2,4-diamino-9-[2-(dimethylamino)ethoxy]-5H-chromeno[2,3-b]pyridine-3-carbonitrile,  
2,4-bis(butylamino)-7,8-dimethoxy-5H-chromeno[2,3-b]pyridine-3-carbonitrile,  
2-amino-4-(butylamino)-7,8-dimethoxy-5H-chromeno[2,3-b]pyridine-3-carbonitrile,  
7,8-dimethoxy-2,4-bis(propylamino)-5H-chromeno[2,3-b]pyridine-3-carbonitrile,  
2,4-bis(ethylamino)-7,8-dimethoxy-5H-chromeno[2,3-b]pyridine-3-carbonitrile,  
2-amino-4-(ethylamino)-7,8-dimethoxy-5H-chromeno[2,3-b]pyridine-3-carbonitrile,  
2,4-diamino-6,8-dimethoxy-5H-chromeno[2,3-b]pyridine-3-carbonitrile,  
2,4-diamino-7-(trifluoromethoxy)-5H-chromeno[2,3-b]pyridine-3-carbonitrile,  
2,4-diamino-7-bromo-9-methoxy-5H-chromeno[2,3-b]pyridine-3-carbonitrile,  
2,4-diamino-9-methoxy-7-nitro-5H-chromeno[2,3-b]pyridine-3-carbonitrile,  
7,9-diamino-10H-[1,3]dioxolo[6,7]chromeno[2,3-b]pyridine-8-carbonitrile,  
7,9-diamino-10H-[1,3]dioxolo[6,7]chromeno[2,3-b]pyridine-8-carbonitrile,  
2,4-diamino-8-methyl-5H-chromeno[2,3-b]pyridine-3-carbonitrile,  
7,8-dimethoxy-2,4-bis[(2-methoxyethyl)amino]-5H-chromeno[2,3-b]pyridine-3-carbonitrile,

2-amino-7,8-dimethoxy-4-[(2-methoxyethyl)amino]-5H-chromeno[2,3-b]pyridine-3-carbonitrile,

2-amino-7,8-dimethoxy-4-[(2-pyrrolidin-1-ylethyl)amino]-5H-chromeno[2,3-b]pyridine-3-carbonitrile,

7,8-dimethoxy-2,4-bis[(2-pyrrolidin-1-ylethyl)amino]-5H-chromeno[2,3-b]pyridine-3-carbonitrile,

2,4-bis(glyciny)-7,8-dimethoxy-5H-chromeno[2,3-b]pyridine-3-carbonitrile,

N-(2-amino-3-cyano-7,8-dimethoxy-5H-chromeno[2,3-b]pyridin-4-yl)glycine,

2,4-diamino-3-cyano-5H-chromeno[2,3-b]pyridine-9-carboxylic acid,

2,4-diamino-6-methoxy-5H-chromeno[2,3-b]pyridine-3-carbonitrile,

2,4-diamino-9-bromo-7-chloro-5H-chromeno[2,3-b]pyridine-3-carbonitrile,

2,4-bis(ethylamino)-7,8-dihydroxy-5H-chromeno[2,3-b]pyridine-3-carbonitrile,

2,4-diamino-6-bromo-9-methoxy-5H-chromeno[2,3-b]pyridine-3-carbonitrile,

2,4-diamino-8-hydroxy-7,9-bis(piperidin-1-ylmethyl)-5H-chromeno[2,3-b]pyridine-3-carbonitrile,

2,4-diamino-5-phenyl-8-hydroxy-5H-chromeno[2,3-b]pyridine-3-carbonitrile,

2,4-diamino-5-(3-fluoro-phenyl)-8-methoxy-5H-chromeno[2,3-b]pyridine-3-carbonitrile,

2,4-diamino-9-hydroxy-6,8-bis(piperidin-1-ylmethyl)-5H-chromeno[2,3-b]pyridine-3-carbonitrile,

2,4-diamino-7-bromo-8-methoxy-5H-chromeno[2,3-b]pyridine-3-carbonitrile,

2,4-diamino-5-phenyl-8-methoxy-5H-chromeno[2,3-b]pyridine-3-carbonitrile,

2,4-diamino-9-fluoro-5H-thiochromeno[2,3-b]pyridine-3-carbonitrile 10,10-dioxide,

2,4-diamino-7-nitro-5H-thiochromeno[2,3-b]pyridine-3-carbonitrile,

2,4-diamino-7-methoxy-5H-thiochromeno[2,3-b]pyridine-3-carbonitrile 10,10-dioxide,

2,4-diamino-7-methoxy-5H-thiochromeno[2,3-b]pyridine-3-carbonitrile,

2,4-diamino-5H-thiochromeno[2,3-b]pyridine-3-carbonitrile 10,10-dioxide,

2,4-diamino-5H-thiochromeno[2,3-b]pyridine-3-carbonitrile,

2,4-diamino-7-fluoro-5H-thiochromeno[2,3-b]pyridine-3-carbonitrile,

~~2-amino-7,9-dimethyl-5-oxo-5H-chromeno[2,3-b]pyridine-3-carbonitrile,~~

~~2-amino-7-isopropyl-5-oxo-5H-chromeno[2,3-b]pyridine-3-carbonitrile,~~

~~2-amino-7-ethyl-5-oxo-5H-chromeno[2,3-b]pyridine-3-carbonitrile,~~  
~~2-amino-7-methyl-5-oxo-5H-chromeno[2,3-b]pyridine-3-carbonitrile,~~  
~~2-amino-7-chloro-5-oxo-5H-chromeno[2,3-b]pyridine-3-carbonitrile,~~  
~~2-amino-7-bromo-5-oxo-5H-chromeno[2,3-b]pyridine-3-carbonitrile,~~  
~~2-amino-5-oxo-5H-chromeno[2,3-b]pyridine-3-carbonitrile,~~ and  
~~3-amino-5H-pyrido[3,4-b][1,4]benzothiazine-4-carbonitrile~~ prodrugs, salts,  
tautomers, and combinations thereof.

9. (original) The aminocyanopyridine compound according to claim 8, wherein the compound is selected from the group consisting of:

2,4-diamino-7,8-dihydroxy-5H-chromeno[2,3-b]pyridine-3-carbonitrile,  
2,4-diamino-8-hydroxy-5H-chromeno[2,3-b]pyridine-3-carbonitrile,  
2-amino-7,8-dihydroxy-4-[(2-hydroxyethyl)amino]-5H-chromeno[2,3-b]pyridine-3-carbonitrile,  
2,4-diamino-7,8-dimethoxy-5H-chromeno[2,3-b]pyridine-3-carbonitrile,  
2-amino-7,8-dihydroxy-4-(propylamino)-5H-chromeno[2,3-b]pyridine-3-carbonitrile,  
2-amino-4-(ethylamino)-7,8-dihydroxy-5H-chromeno[2,3-b]pyridine-3-carbonitrile,  
2,4-diamino-9-hydroxy-5H-chromeno[2,3-b]pyridine-3-carbonitrile,  
2,4-diamino-9-fluoro-5H-chromeno[2,3-b]pyridine-3-carbonitrile,  
2,4-diamino-7-hydroxy-5H-chromeno[2,3-b]pyridine-3-carbonitrile,  
2,4-diamino-8-(2-hydroxyethoxy)-5H-chromeno[2,3-b]pyridine-3-carbonitrile,  
8,10-diamino-2,3-dihydro-11H-[1,4]dioxino[2',3':6,7]chromeno[2,3-b]pyridine-9-carbonitrile,  
2,4,7-triamino-5H-chromeno[2,3-b]pyridine-3-carbonitrile  
2,4-diamino-5H-chromeno[2,3-b]pyridine-3-carbonitrile,  
2,4-diamino-8-(2-ethoxyethoxy)-7-hydroxy-5H-chromeno[2,3-b]pyridine-3-carbonitrile,  
2,4-diamino-9-hydroxy-8-methoxy-5H-chromeno[2,3-b]pyridine-3-carbonitrile,  
2,4-diamino-6,8-dihydroxy-5H-chromeno[2,3-b]pyridine-3-carbonitrile,  
2,4-diamino-8-ethoxy-7-hydroxy-5H-chromeno[2,3-b]pyridine-3-carbonitrile,  
2,4-diamino-8-(2-ethoxyethoxy)-5H-chromeno[2,3-b]pyridine-3-carbonitrile,

2,4-diamino-8-(2-aminoethoxy)-5H-chromeno[2,3-b]pyridine-3-carbonitrile,  
2,4-diamino-3-cyano-5H-chromeno[2,3-b]pyridine-7-carboxylic acid,  
2,4-diamino-8,9-dihydroxy-5H-chromeno[2,3-b]pyridine-3-carbonitrile,  
2,4-diamino-8-(2-morpholin-4-ylethoxy)-5H-chromeno[2,3-b]pyridine-3-carbonitrile,  
[(2,4-diamino-3-cyano-5H-chromeno[2,3-b]pyridin-8-yl)oxy]acetic acid,  
2,4-diamino-9-methoxy-5H-chromeno[2,3-b]pyridine-3-carbonitrile,  
2,4-diamino-8-(2-pyrrolidin-1-ylethoxy)-5H-chromeno[2,3-b]pyridine-3-carbonitrile,  
2-amino-7,8-dimethoxy-4-(methylamino)-5H-chromeno[2,3-b]pyridine-3-carbonitrile,  
2,4-diamino-8-methoxy-5H-chromeno[2,3-b]pyridine-3-carbonitrile,  
2,4-diamino-8-[2-(dimethylamino)ethoxy]-5H-chromeno[2,3-b]pyridine-3-carbonitrile,  
2,4,7-triamino-9-methoxy-5H-chromeno[2,3-b]pyridine-3-carbonitrile,  
2(2,4-diamino-3-cyano-8-methoxy-5H-chromeno[2,3-b]pyridin-5-yl)malononitrile,  
2,4-diamino-7,8-di[2-(amino)ethoxy]-5H-chromeno[2,3-b]pyridine-3-carbonitrile,  
2,4-diamino-9-nitro-5H-chromeno[2,3-b]pyridine-3-carbonitrile,  
2-amino-7,8-dimethoxy-4-[(4-methoxyphenyl)amino]-5H-chromeno[2,3-b]pyridine-3-  
carbonitrile,  
2,4-diamino-8-methoxy-5H-chromeno[2,3-b]pyridine-3-carbonitrile,  
2(2,4-diamino-3-cyano-7-hydroxy-5H-chromeno[2,3-b]pyridin-5-yl)malononitrile,  
2(2,4-diamino-3-cyano-7-bromo-5H-chromeno[2,3-b]pyridin-5-yl)malononitrile,  
2-amino-8-ethoxy-4-(ethylamino)-5H-chromeno[2,3-b]pyridine-3-carbonitrile,  
2,4,9-triamino-5H-chromeno[2,3-b]pyridine-3-carbonitrile,  
2,4,7-triamino-5H-thiochromeno[2,3-b]pyridine-3-carbonitrile,  
2-amino-7,8-dimethoxy-4-[(4-methoxyphenyl)amino]-5H-chromeno[2,3-b]pyridine-3-  
carbonitrile,  
2(2,4-diamino-3-cyano-7-methoxy-5H-chromeno[2,3-b]pyridin-5-yl)malononitrile,  
2,4-diamino-9-hydroxy-8-(piperidin-1-ylmethyl)-5H-chromeno[2,3-b]pyridine-3-  
carbonitrile,  
7,8-bis(allyloxy)-2,4-diamino-5H-chromeno[2,3-b]pyridine-3-carbonitrile,  
2-amino-8-(2-ethoxyethoxy)-4-[(2-ethoxyethyl)amino]-5H-chromeno[2,3-b]pyridine-3-  
carbonitrile,

tert-butyl {[2,4-diamino-7-(2-tert-butoxy-2-oxoethoxy)-3-cyano-5H-chromeno[2,3-b]pyridin-8-yl]oxy}acetate,

2-amino-4-[(2-aminoethyl)amino]-7,8-dimethoxy-5H-chromeno[2,3-b]pyridine-3-carbonitrile,

2(2,4-diamino-3-cyano-8-hydroxy-5H-chromeno[2,3-b]pyridin-5-yl)malononitrile,

2,4,7-triamino-5H-thiochromeno[2,3-b]pyridine-3-carbonitrile 10,10-dioxide,

2,4-diamino-7-bromo-5H-chromeno[2,3-b]pyridine-3-carbonitrile,

2-amino-7,8-dimethoxy-4-(propylamino)-5H-chromeno[2,3-b]pyridine-3-carbonitrile,

2,4-diamino-7-hydroxy-5H-thiochromeno[2,3-b]pyridine-3-carbonitrile,

2,4-diamino-7-(dimethylamino)-5H-chromeno[2,3-b]pyridine-3-carbonitrile,

2,4-diamino-7-methoxy-5H-chromeno[2,3-b]pyridine-3-carbonitrile,

2(2,4-diamino-3-cyano-9-methoxy-5H-chromeno[2,3-b]pyridin-5-yl)malononitrile,

2-amino-4-(benzylamino)-7,8-dimethoxy-5H-chromeno[2,3-b]pyridine-3-carbonitrile,

8-(allyloxy)-2,4-diamino-5H-chromeno[2,3-b]pyridine-3-carbonitrile,

2,4-diamino-9-fluoro-5H-thiochromeno[2,3-b]pyridine-3-carbonitrile,

2,4-diamino-7-methoxy-5H-chromeno[2,3-b]pyridine-3-carbonitrile,

2,4-diamino-9-(2-pyrrolidin-1-ylethoxy)-5H-chromeno[2,3-b]pyridine-3-carbonitrile,

2,4-diamino-7-nitro-5H-chromeno[2,3-b]pyridine-3-carbonitrile,

2,4-diamino-10-methyl-5,10-dihydrobenzo[b]-1,8-naphthyridine-3-carbonitrile,

[(2,4-diamino-3-cyano-5H-chromeno[2,3-b]pyridin-9-yl)oxy]acetic acid,

2-amino-4-{[2-(dimethylamino)ethyl]amino}-7,8-dimethoxy-5H-chromeno[2,3-b]pyridine-3-carbonitrile,

2,4-diamino-7-nitro-5H-thiochromeno[2,3-b]pyridine-3-carbonitrile 10,10-dioxide,

2,4-diamino-7-phenyl-5H-chromeno[2,3-b]pyridine-3-carbonitrile, and

prodrugs, salts, tautomers, and combinations thereof.

10. (original) The aminocyanopyridine compound according to claim 8, wherein the compound is selected from the group consisting of:

2,4-diamino-7,8-dihydroxy-5H-chromeno[2,3-b]pyridine-3-carbonitrile,

2,4-diamino-8-hydroxy-5H-chromeno[2,3-b]pyridine-3-carbonitrile,

2-amino-7,8-dihydroxy-4-[(2-hydroxyethyl)amino]-5H-chromeno[2,3-b]pyridine-3-carbonitrile,

2,4-diamino-7,8-dimethoxy-5H-chromeno[2,3-b]pyridine-3-carbonitrile,

2-amino-7,8-dihydroxy-4-(propylamino)-5H-chromeno[2,3-b]pyridine-3-carbonitrile,

2-amino-4-(ethylamino)-7,8-dihydroxy-5H-chromeno[2,3-b]pyridine-3-carbonitrile,

2,4-diamino-9-hydroxy-5H-chromeno[2,3-b]pyridine-3-carbonitrile,

2,4-diamino-9-fluoro-5H-chromeno[2,3-b]pyridine-3-carbonitrile,

2,4-diamino-7-hydroxy-5H-chromeno[2,3-b]pyridine-3-carbonitrile,

2,4-diamino-8-(2-hydroxyethoxy)-5H-chromeno[2,3-b]pyridine-3-carbonitrile,

8,10-diamino-2,3-dihydro-11H-[1,4]dioxino[2',3':6,7]chromeno[2,3-b]pyridine-9-carbonitrile,

2,4,7-triamino-5H-chromeno[2,3-b]pyridine-3-carbonitrile

2,4-diamino-5H-chromeno[2,3-b]pyridine-3-carbonitrile,

2,4-diamino-8-(2-ethoxyethoxy)-7-hydroxy-5H-chromeno[2,3-b]pyridine-3-carbonitrile,

2,4-diamino-9-hydroxy-8-methoxy-5H-chromeno[2,3-b]pyridine-3-carbonitrile,

2,4-diamino-6,8-dihydroxy-5H-chromeno[2,3-b]pyridine-3-carbonitrile,

2,4-diamino-8-ethoxy-7-hydroxy-5H-chromeno[2,3-b]pyridine-3-carbonitrile,

2,4-diamino-8-(2-ethoxyethoxy)-5H-chromeno[2,3-b]pyridine-3-carbonitrile,

2,4-diamino-8-(2-aminoethoxy)-5H-chromeno[2,3-b]pyridine-3-carbonitrile,

2,4-diamino-3-cyano-5H-chromeno[2,3-b]pyridine-7-carboxylic acid,

2,4-diamino-8,9-dihydroxy-5H-chromeno[2,3-b]pyridine-3-carbonitrile,

2,4-diamino-8-(2-morpholin-4-ylethoxy)-5H-chromeno[2,3-b]pyridine-3-carbonitrile,

[(2,4-diamino-3-cyano-5H-chromeno[2,3-b]pyridin-8-yl)oxy]acetic acid,

2,4-diamino-9-methoxy-5H-chromeno[2,3-b]pyridine-3-carbonitrile,

2,4-diamino-8-(2-pyrrolidin-1-ylethoxy)-5H-chromeno[2,3-b]pyridine-3-carbonitrile,

2-amino-7,8-dimethoxy-4-(methylamino)-5H-chromeno[2,3-b]pyridine-3-carbonitrile,

2,4-diamino-8-methoxy-5H-chromeno[2,3-b]pyridine-3-carbonitrile,

2,4-diamino-8-[2-(dimethylamino)ethoxy]-5H-chromeno[2,3-b]pyridine-3-carbonitrile,

2,4,7-triamino-9-methoxy-5H-chromeno[2,3-b]pyridine-3-carbonitrile,

2(2,4-diamino-3-cyano-8-methoxy-5H-chromeno[2,3-b]pyridin-5-yl)malononitrile,



2,4-diamino-7,8-di[2-(amino)ethoxy]-5H-chromeno[2,3-b]pyridine-3-carbonitrile,  
2,4-diamino-9-nitro-5H-chromeno[2,3-b]pyridine-3-carbonitrile,  
2-amino-7,8-dimethoxy-4-[(4-methoxyphenyl)amino]-5H-chromeno[2,3-b]pyridine-3-carbonitrile,  
2,4-diamino-8-methoxy-5H-chromeno[2,3-b]pyridine-3-carbonitrile,  
2(2,4-diamino-3-cyano-7-hydroxy-5H-chromeno[2,3-b]pyridin-5-yl)malononitrile,  
2(2,4-diamino-3-cyano-7-bromo-5H-chromeno[2,3-b]pyridin-5-yl)malononitrile,  
2-amino-8-ethoxy-4-(ethylamino)-5H-chromeno[2,3-b]pyridine-3-carbonitrile,  
2,4,9-triamino-5H-chromeno[2,3-b]pyridine-3-carbonitrile,  
2,4,7-triamino-5H-thiochromeno[2,3-b]pyridine-3-carbonitrile,  
2-amino-7,8-dimethoxy-4-[(4-methoxyphenyl)amino]-5H-chromeno[2,3-b]pyridine-3-carbonitrile,  
2(2,4-diamino-3-cyano-7-methoxy-5H-chromeno[2,3-b]pyridin-5-yl)malononitrile,  
2,4-diamino-9-hydroxy-8-(piperidin-1-ylmethyl)-5H-chromeno[2,3-b]pyridine-3-carbonitrile,  
7,8-bis(allyloxy)-2,4-diamino-5H-chromeno[2,3-b]pyridine-3-carbonitrile,  
2-amino-8-(2-ethoxyethoxy)-4-[(2-ethoxyethyl)amino]-5H-chromeno[2,3-b]pyridine-3-carbonitrile, and  
prodrugs, salts, tautomers, and combinations thereof.

11. (original) The aminocyanopyridine compound according to claim 8, wherein the compound is selected from the group consisting of:

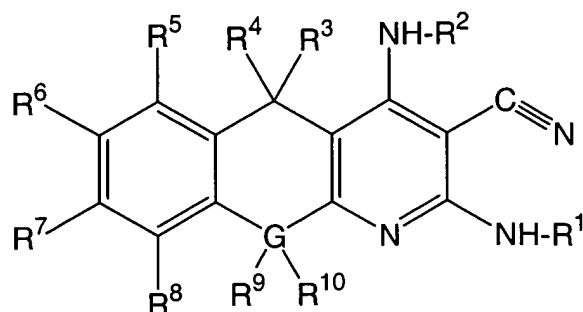
2,4-diamino-7,8-dihydroxy-5H-chromeno[2,3-b]pyridine-3-carbonitrile,  
2,4-diamino-8-hydroxy-5H-chromeno[2,3-b]pyridine-3-carbonitrile,  
2-amino-7,8-dihydroxy-4-[(2-hydroxyethyl)amino]-5H-chromeno[2,3-b]pyridine-3-carbonitrile,  
2,4-diamino-7,8-dimethoxy-5H-chromeno[2,3-b]pyridine-3-carbonitrile,  
2-amino-7,8-dihydroxy-4-(propylamino)-5H-chromeno[2,3-b]pyridine-3-carbonitrile,  
2-amino-4-(ethylamino)-7,8-dihydroxy-5H-chromeno[2,3-b]pyridine-3-carbonitrile,  
2,4-diamino-9-hydroxy-5H-chromeno[2,3-b]pyridine-3-carbonitrile,

2,4-diamino-9-fluoro-5H-chromeno[2,3-b]pyridine-3-carbonitrile,  
2,4-diamino-7-hydroxy-5H-chromeno[2,3-b]pyridine-3-carbonitrile,  
2,4-diamino-8-(2-hydroxyethoxy)-5H-chromeno[2,3-b]pyridine-3-carbonitrile,  
8,10-diamino-2,3-dihydro-11H-[1,4]dioxino[2',3':6,7]chromeno[2,3-b]pyridine-9-carbonitrile,

2,4,7-triamino-5H-chromeno[2,3-b]pyridine-3-carbonitrile  
2,4-diamino-5H-chromeno[2,3-b]pyridine-3-carbonitrile,  
2,4-diamino-8-(2-ethoxyethoxy)-7-hydroxy-5H-chromeno[2,3-b]pyridine-3-carbonitrile,  
2,4-diamino-9-hydroxy-8-methoxy-5H-chromeno[2,3-b]pyridine-3-carbonitrile,  
2,4-diamino-6,8-dihydroxy-5H-chromeno[2,3-b]pyridine-3-carbonitrile,  
2,4-diamino-8-ethoxy-7-hydroxy-5H-chromeno[2,3-b]pyridine-3-carbonitrile,  
2,4-diamino-8-(2-ethoxyethoxy)-5H-chromeno[2,3-b]pyridine-3-carbonitrile,  
2,4-diamino-8-(2-aminoethoxy)-5H-chromeno[2,3-b]pyridine-3-carbonitrile,  
2,4-diamino-3-cyano-5H-chromeno[2,3-b]pyridine-7-carboxylic acid,  
2,4-diamino-8,9-dihydroxy-5H-chromeno[2,3-b]pyridine-3-carbonitrile,  
2,4-diamino-8-(2-morpholin-4-ylethoxy)-5H-chromeno[2,3-b]pyridine-3-carbonitrile,  
[(2,4-diamino-3-cyano-5H-chromeno[2,3-b]pyridin-8-yl)oxy]acetic acid,  
2,4-diamino-9-methoxy-5H-chromeno[2,3-b]pyridine-3-carbonitrile,  
2,4-diamino-8-(2-pyrrolidin-1-ylethoxy)-5H-chromeno[2,3-b]pyridine-3-carbonitrile,  
2-amino-7,8-dimethoxy-4-(methylamino)-5H-chromeno[2,3-b]pyridine-3-carbonitrile,  
2,4-diamino-8-methoxy-5H-chromeno[2,3-b]pyridine-3-carbonitrile,  
2,4-diamino-8-[2-(dimethylamino)ethoxy]-5H-chromeno[2,3-b]pyridine-3-carbonitrile,  
2,4,7-triamino-9-methoxy-5H-chromeno[2,3-b]pyridine-3-carbonitrile,  
2(2,4-diamino-3-cyano-8-methoxy-5H-chromeno[2,3-b]pyridin-5-yl)malononitrile, and  
prodrugs, salts, tautomers, and combinations thereof.

**Claims 12-18 (canceled).**

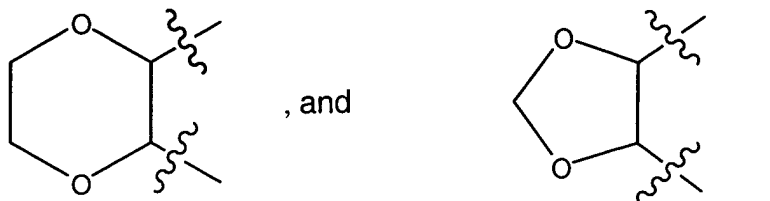
19. **(currently amended)** A pharmaceutical composition comprising a pharmaceutically acceptable carrier and an aminocyanopyridine MK-2 inhibiting compound having the structure:



wherein:

each of  $R^1$ ,  $R^2$ ,  $[R^3, R^4]$ ,  $R^5$ ,  $R^6$ ,  $R^7$ , and  $R^8$  is independently selected from the group consisting of hydrogen, hydroxy, amino, halo, nitro, branched or unbranched  $C_1$ - $C_6$  alkyl,  $C_2$ - $C_6$  alkenyl,  $C_2$ - $C_6$  alkynyl,  $C_1$ - $C_6$  alkoxy, hydroxy  $C_1$ - $C_6$  alkyl, hydroxy  $C_1$ - $C_6$  alkoxy,  $C_1$ - $C_6$  alkoxy  $C_1$ - $C_6$  alkoxy,  $C_1$ - $C_6$  alkoxy  $C_1$ - $C_6$  alkyl,  $C_1$ - $C_6$  alkenoxy, branched or unbranched amino  $C_1$ - $C_6$  alkyl, diamino  $C_2$ - $C_6$  alkyl,  $C_1$ - $C_6$  alkylamino  $C_1$ - $C_6$  alkyl,  $C_1$ - $C_6$  alkylamino, di- ( $C_1$ - $C_6$  alkyl)amino,  $C_1$ - $C_4$  alkoxyaryl amino,  $C_1$ - $C_4$  alkoxyalkyl amino, amino  $C_1$ - $C_6$  alkoxy, di- ( $C_1$ - $C_4$  alkylamino,  $C_2$ - $C_6$  alkoxy, di- ( $C_1$ - $C_6$  alkyl)amino  $C_1$ - $C_6$  alkyl,  $C_1$ - $C_6$  alkylamino  $C_1$ - $C_6$  alkoxy, halo  $C_1$ - $C_6$  alkoxy, dihalo  $C_1$ - $C_6$  alkoxy, trihalo  $C_1$ - $C_6$  alkoxy, cyano  $C_1$ - $C_6$  alkyl, dicyano  $C_1$ - $C_6$  alkyl, cyano  $C_1$ - $C_6$  alkoxy, dicyano  $C_1$ - $C_6$  alkoxy, carbamyl  $C_1$ - $C_4$  alkoxy, heterocyclyl  $C_1$ - $C_4$  alkoxy, heteroaryl  $C_1$ - $C_4$  alkoxy, sulfo, sulfamyl,  $C_1$ - $C_4$  alkylaminosulfonyl, hydroxy  $C_1$ - $C_4$  alkylaminosulfonyl, di- ( $C_1$ - $C_4$  alkyl)aminosulfonyl,  $C_1$ - $C_4$  alkylthio,  $C_1$ - $C_4$  alkylsulfonyl,  $C_1$ - $C_4$  alkylsulfinyl, aryl, aryl  $C_1$ - $C_6$  alkyl, heterocyclyl  $C_1$ - $C_6$  alkyl, heteroaryl  $C_1$ - $C_6$  alkyl, heterocyclyl  $C_1$ - $C_6$  alkoxy, heteroaryl  $C_1$ - $C_6$  alkoxy, aryl  $C_1$ - $C_6$  alkoxy, where the aryl ring can be substituted or unsubstituted, and, if substituted, the substituent group is selected from one or more of the group consisting of  $C_1$ - $C_6$  alkyl, halo, amino, and  $C_1$ - $C_6$  alkoxy, substituted or unsubstituted  $C_3$ - $C_6$  cyclyl,  $C_3$ - $C_6$  heterocyclyl, and, if substituted, the substituent group is selected from one or more of the group consisting of  $C_1$ - $C_6$  alkyl,  $C_1$ - $C_6$  alkoxy, halo, amino, and where the  $C_3$ - $C_6$  heterocyclyl ring contains O, S, or N, branched or unbranched  $C_1$ - $C_6$  alkoxycarbonyl  $C_1$ - $C_6$  alkoxy, and carboxy, carboxy  $C_1$ - $C_6$  alkoxy, carboxy  $C_1$ - $C_6$  alkyl, hydroxy  $C_1$ - $C_4$  alkoxycarbonyl,  $C_1$ - $C_4$  alkoxycarbonyl,

where  $R^6$  and  $R^7$  are such that they optionally join to form a ring system of the type selected from



R<sup>3</sup> and R<sup>4</sup> are independently selected from the group consisting of hydrogen, hydroxy, amino, halo, nitro, branched or unbranched C<sub>1</sub>-C<sub>6</sub> alkyl, C<sub>2</sub>-C<sub>6</sub> alkenyl, C<sub>2</sub>-C<sub>6</sub> alkynyl, C<sub>1</sub>-C<sub>6</sub> alkoxy, hydroxy C<sub>1</sub>-C<sub>6</sub> alkyl, hydroxy C<sub>1</sub>-C<sub>6</sub> alkoxy, C<sub>1</sub>-C<sub>6</sub> alkoxy C<sub>1</sub>-C<sub>6</sub> alkoxy, C<sub>1</sub>-C<sub>6</sub> alkoxy C<sub>1</sub>-C<sub>6</sub> alkyl, C<sub>1</sub>-C<sub>6</sub> alkenoxy, branched or unbranched amino C<sub>1</sub>-C<sub>6</sub> alkyl, diamino C<sub>2</sub>-C<sub>6</sub> alkyl, C<sub>1</sub>-C<sub>6</sub> alkylamino C<sub>1</sub>-C<sub>6</sub> alkyl, C<sub>1</sub>-C<sub>6</sub> alkylamino, di-(C<sub>1</sub>-C<sub>6</sub> alkyl)amino, C<sub>1</sub>-C<sub>4</sub> alkoxyarylamino, C<sub>1</sub>-C<sub>4</sub> alkoxyalkylamino, amino C<sub>1</sub>-C<sub>6</sub> alkoxy, di-(C<sub>1</sub>-C<sub>4</sub> alkylamino, C<sub>2</sub>-C<sub>6</sub> alkoxy, di-(C<sub>1</sub>-C<sub>6</sub> alkyl)amino C<sub>1</sub>-C<sub>6</sub> alkyl, C<sub>1</sub>-C<sub>6</sub> alkylamino C<sub>1</sub>-C<sub>6</sub> alkoxy, halo C<sub>1</sub>-C<sub>6</sub> alkoxy, dihalo C<sub>1</sub>-C<sub>6</sub> alkoxy, trihalo C<sub>1</sub>-C<sub>6</sub> alkoxy, cyano C<sub>1</sub>-C<sub>6</sub> alkyl, cyano C<sub>1</sub>-C<sub>6</sub> alkoxy, dicyano C<sub>1</sub>-C<sub>6</sub> alkoxy, carbamyl C<sub>1</sub>-C<sub>4</sub> alkoxy, heterocyclyl C<sub>1</sub>-C<sub>4</sub> alkoxy, heteroaryl C<sub>1</sub>-C<sub>4</sub> alkoxy, sulfo, sulfamyl, C<sub>1</sub>-C<sub>4</sub> alkylaminosulfonyl, hydroxy C<sub>1</sub>-C<sub>4</sub> alkylaminosulfonyl, di-(C<sub>1</sub>-C<sub>4</sub> alkyl)aminosulfonyl, C<sub>1</sub>-C<sub>4</sub> alkylthio, C<sub>1</sub>-C<sub>4</sub> alkylsulfonyl, C<sub>1</sub>-C<sub>4</sub> alkylsulfinyl, aryl, aryl C<sub>1</sub>-C<sub>6</sub> alkyl, heterocyclyl C<sub>1</sub>-C<sub>6</sub> alkyl, heteroaryl C<sub>1</sub>-C<sub>6</sub> alkyl, heterocyclyl C<sub>1</sub>-C<sub>6</sub> alkoxy, heteroaryl C<sub>1</sub>-C<sub>6</sub> alkoxy, aryl C<sub>1</sub>-C<sub>6</sub> alkoxy, where the aryl ring can be substituted or unsubstituted, and, if substituted, the substituent group is selected from one or more of the group consisting of C<sub>1</sub>-C<sub>6</sub> alkyl, halo, amino, and C<sub>1</sub>-C<sub>6</sub> alkoxy, substituted or unsubstituted C<sub>3</sub>-C<sub>6</sub> cyclyl, C<sub>3</sub>-C<sub>6</sub> heterocyclyl, and, if substituted, the substituent group is selected from one or more of the group consisting of C<sub>1</sub>-C<sub>6</sub> alkyl, C<sub>1</sub>-C<sub>6</sub> alkoxy, halo, amino, and where the C<sub>3</sub>-C<sub>6</sub> heterocyclyl ring contains O, S, or N, branched or unbranched C<sub>1</sub>-C<sub>6</sub> alkoxycarbonyl C<sub>1</sub>-C<sub>6</sub> alkoxy, and carboxy, carboxy C<sub>1</sub>-C<sub>6</sub> alkoxy, carboxy C<sub>1</sub>-C<sub>6</sub> alkyl, hydroxy C<sub>1</sub>-C<sub>4</sub> alkoxycarbonyl, C<sub>1</sub>-C<sub>4</sub> alkoxycarbonyl;

G is selected from the group consisting of oxygen, sulfur, and nitrogen;

when G is oxygen, R<sup>9</sup> and R<sup>10</sup> are absent;

when G is sulfur, each of R<sup>9</sup> and R<sup>10</sup> is optionally absent, or is oxo;

when G is nitrogen, R<sup>9</sup> is absent, and R<sup>10</sup> is C<sub>1</sub>-C<sub>4</sub>-alkyl.

Amendment A  
10/729,598  
January 18, 2005

**Claim 20 (canceled).**